UNITED STATES PATENT AND TRADEMARK OFFICE

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10/674,253	09/29/2003	Gil Young Choi	5895P041	3176

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>26 September 2008</u>.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-5</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-5</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.　　Applicant's arguments mailed on 09/26/2008 have been fully considered but are moot in view of the new ground(s) of rejection which is deemed appropriate to address all of the needs at this time.

Claim Rejections - 35 USC § 102

2.　　The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.　　Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Chiu et al. (U.S. Patent No. 6,744,767).

　　Regarding claim 1, with respect to Figures 3-6, 8-10, Chiun teaches a method of providing Differentiated Service (DiffServ) based Quality of Service (QoS) to Voice over Internet Protocol (VoIP) packets through a router in an Internet protocol (IP) network, the IP network comprising routers, a VoIP call control device for performing a call processing function

on the basis of a VoIP signal, and a QoS control server for providing QoS (col.1, line 44-col.2, line 36), the method comprising the steps of:

providing VoIP call session information including source and destination IP addresses, source and destination user datagram protocol (UDP) port numbers, and requested QoS information to the QoS control server by the VoIP call control device (col.1, line 44-col.2, line 36, col.3, lines 25-40, col.9, lines 41-58);

Chiun further teaches finding source and destination routers using the VoIP call session information and sending the VoIP call session information requiring provision of QoS to the source and destination routers by the QoS control server (col.1, line 44-col.2, line 36, col.5, lines 22-32, col.6, lines 29-65, col.7, lines 23-35, col.9, lines 41-58); and

Chiun further teaches providing DiffServ based QoS to packet flows by the aggregate of packet flows using the VoIP call session information at the time of VoIP packet forwarding by the routers (col.1, line 44-col.2, line 56, col.3, lines 25-40, col.7, line 36-col.8, line 15).

Claim 2 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Raisanen, as applied to claim 1, teaches that providing QoS to VoIP packets through a router, wherein said routers are open programmable switched routers which are capable of providing QoS to VoIP packets (col.1, line 44-col.2, line 56, col.3, lines 25-40, col.7, line 23-col.8, line 15).

Regarding claim 3, Raisanen, as applied to claim 1, teaches that said routers, said VoIP call control device and said QoS control server are designed in a clients-server structure such that

both said routers and VoIP call control device are operated as clients, and said QoS control

server is operated as a server and said routers, said VoIP call control device and said QoS control

server are connected to each other in a TCP connection manner through an open application

programming interface (abstract; col.1, line 44-col.2, line 56, col.3, lines 25-40, col.7, line 23-

col.8, line 15).

Regarding claim 4, Raisanen, as applied to claim 1, teaches wherein the step b) is

performed such that, if router interface configuration information of each of said routers is

initialized and modified, said QoS control server receives the router interface configuration

information from a corresponding router, manages the router interface configuration information,

and uses the router interface configuration information to find a corresponding router at the time

of receiving a QoS session addition/deletion request (abstract; col.1, line 44-col.2, line 56, col.3,

lines 25-40, col.7, line 23-col.8, line 15).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness
        or nonobviousness.

6.   Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al.

(International Pub. No. WO 02/07394) in view of Chiu et al. (U.S. Patent No. 6,744,767).

Regarding claim 1, with respect to Figures 1-4, 6, 7, 9, Raisanen teaches a method of

providing Differentiated Service (DiffServ) based Quality of Service (QoS) to Voice over

Internet Protocol (VoIP) packets through a router in an Internet protocol (IP) network, the IP

network comprising routers, a VoIP call control device for performing a call processing function

on the basis of a VoIP signal, and a QOS manager [i.e., QoS control server] for providing QoS

(page 2, lines 30-36, page 3, lines 1, 24-29, page 4, lines 19-27), the method comprising the steps

of:

providing VoIP call session information including source and destination IP addresses,

source and destination user datagram protocol (UDP) port numbers, and requested QoS

information to the QoS control server by the VoIP call control device (fig.1, 4; page 4, lines 19-

27, page 6, lines 24-36);

Raisanen further teaches finding source and destination routers using the VoIP call session information and sending the VoIP call session information requiring provision of QoS to the source and destination routers by the QoS control server (fig.1, 4; page 4, lines 19-27, page 6, lines 24-36); and

Raisanen further teaches providing QoS to packet flows by the aggregate of packet flows using the VoIP call session information at the time of VoIP packet forwarding by the routers (fig.1, 4; page 2, lines 30-36, page 3, line 1, page 4, lines 19-27, page 6, lines 24-36, page 7, line 1-page 8, line 7, page 10, lines 7-14).

However, Raisanen does not specifically teach providing DiffServ based QoS to packet flows. Chiu teaches providing DiffServ based QoS to packet flows (abstract; col.1, line 44-col.2, line 36). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Raisanen to incorporate feature of providing DiffServ based QoS to packet flows in Raisanen's invention as taught by Chiu. The motivation for the modification is to do so in order to aggregate flows rather than individual flows to receive a service.

Claim 2 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Raisanen, as applied to claim 1, teaches that providing QoS to VoIP packets through a router, wherein said routers are open programmable switched routers which are capable of providing QoS to VoIP packets (fig.1, 4; page 2, lines 30-36, page 3, line 1, page 4, lines 19-27, page 6, lines 24-36).

Regarding claim 3, Raisanen, as applied to claim 1, teaches that said routers, said VoIP call control device and said QoS control server are designed in a clients-server structure such that both said routers and VoIP call control device are operated as clients, and said QoS control server is operated as a server and said routers, said VoIP call control device and said QoS control server are connected to each other in a TCP connection manner through an open application programming interface (fig.1, 4; page 4, lines 19-27, page 6, lines 24-36).

Regarding claim 4, Raisanen, as applied to claim 1, teaches wherein the step b) is performed such that, if router interface configuration information of each of said routers is initialized and modified, said QoS control server receives the router interface configuration information from a corresponding router, manages the router interface configuration information, and uses the router interface configuration information to find a corresponding router at the time of receiving a QoS session addition/deletion request (page 4, lines 19-27, page 10, lines 26-29, page 13, lines 16-25, page14, lines 4-33, page 15, line 26-page16, lines 9).

7.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. in view of Chiu et al. further in view of Aukia et al. (U.S. Patent No. 6,594,268).

Claim 5 is rejected for the same reasons as discussed above with respect to claim 1. Furthermore, Raisanen, as applied to claim 1, teaches VoIP packets flows requiring provision of QoS using connection setup/disconnection information on end-to-end flows of a VoIP call contained in the received VoIP call session information by said routers and providing QoS to the

classified VoIP packet flows by the aggregate of packet flows (page 4, lines 19-27, page 10, lines 26-29, page 13, lines 16-25, page14, lines 4-33, page 15, line 26-page16, lines 9).

However, Raisanen in view of Chiu does not specifically teach classifying VoIP packets flows requiring provision of QoS. Aukia teaches classifying VoIP packets flows requiring provision of QoS (abstract; col.5, lines 9-17). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Raisanen to incorporate feature of classifying VoIP packets flows requiring provision of QoS in Raisanen's invention in view of Chiu's invention as taught by Aukia. The motivation for the modification is to do so in order to generate new routing path based on packet flows in case of node/link failure or network topology/provisioning change.

Conclusion

8.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to MD S. ELAHEE whose telephone number is (571)272-7536. The examiner can normally be reached on Mon to Fri from 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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